



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,832	12/27/2000	Ligang Lu	YOR920000783US1	6286
7590	03/29/2005		EXAMINER	
Paul D. Greeley, Esq. Ohlandt, Greeley, Ruggiero & Perle, L.L.P. 10th Floor One Landmark Square Stamford, CT 06901-2682			VO, TUNG T	
			ART UNIT	PAPER NUMBER
			2613	
			DATE MAILED: 03/29/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

Wk

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/748,832	LU ET AL.	
	Examiner	Art Unit	
	Tung Vo	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 27 October 2004.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1,3-11 and 13-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,3-11 and 13-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-6, 9-11, and 13-19 rejected under 35 U.S.C. 102(e) as being anticipated by Nilsson et al. (US 6,625,320) as set forth in the previous Office Action dated 07/26/2004.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-8, and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson et al. (US 6,625,320) as applied to claims 1 and 9, and further in view of Kwok et al. (US 5,889,561) as set forth in the previous Office Action dated 07/26/2004.

***Response to Arguments***

5. Applicant's arguments filed 10/27/2004 have been fully considered but they are not persuasive.

The applicant traverses the rejection dated 07/26/2004 because Nilsson does not identically disclose each and every element of independent claims 1 and 9. Independent claim 1 recites in part: a look-ahead estimator to gather information from said input compressed video signal prior to input to said decoder and from said decoder to estimate current signal characteristics of a current picture and future signal characteristics of one or more future incoming pictures, pages 8-10 of the remarks.

The examiner respectfully disagrees with the applicant. It is submitted that Nilsson clearly discloses a system for transcoding compressed video signal including a plurality of

pictures (fig. 3) comprising a decoder (2, 4, 6, 10 of fig. 3) to completely or partially decode an input compressed video signal (1 of fig. 3), a look-ahead estimator (31 of fig. 3) to gather information from said input compressed video signal (32 of fig. 3, e.g. the selected/computed vector, MV'1, as information, from the input compressed video signal; and the input compressed video signal is prior inputting to the decoder 2 of fig. 3) and said decoder (30 of fig. 3, e.g. the reordered information is input to the motion estimation) to estimate current serial characteristics of a current picture (the motion vectors) and future signal characteristics of a future incoming picture (col. 2, lines 61- 67, e.g. current frame and at least other frame are estimated); an encoder (26 of fig. 3) to compress (re-compressing process) the reconstructed (decoded) video signal according to a coding scheme derives from said current and future signal characteristics from said look-ahead estimator (31, MV3 of fig. 3). In view of the discussion above, the Nilsson clearly anticipates the claimed invention.

The applicant further argued that Nilsson's "motion vector estimation unit" 31 is not structurally arranged to be a "look-ahead estimator" that "gather information said compressed video signal prior to input to said decoder", page 10 of the remarks.

The examiner respectfully disagrees with the applicant. It is submitted that Nilsson discloses the motion vector estimation unit (31 of fig. 3) for gathering, collecting, information (motion vector MV1) from the input compressed video signal (1 of fig. 3) prior to the decoder (2 of fig. 3, e.g. the input compressed video signal inputs the motion vector to the motion vector estimation unit and the compressed video signal to the decoder), wherein the motion vector estimation unit has motion vector processing means for processing a current of video signal go together with at least one other frame that is inherently a future frame of the video signal (col. 2,

lines 61-67) and the video signal is the input compressed video signal. In view of the discussion above, Nilsson clearly anticipates the claimed invention.

Applicants respectfully submit that Nilsson does not disclose these elements and limitations recited in both independent claims because Nilsson: (i) does not disclose any use of the "compressed video signal prior to input to said decoder"; (ii) does not disclose estimating characteristics of future pictures (that is, a picture, a picture group, or a picture sub-group not yet decoded); and (iii) does not disclose a "look-ahead estimator" unit separate from the decoder and the encoder, page 11.

The examiner respectfully disagrees with that applicant. It is submitted that Nilsson does disclose these elements and limitations recited in both independent claims 1 and 9. Particularly Nilsson discloses (i) the vector estimation unit (31 of fig. 3) for gathering or collecting information from the compressed video signal prior to input to said decoder; (ii) estimating characteristics of future pictures (that is, a picture, a picture group, or a picture sub-group not yet decoded) (col. 2, lines 61-67, e.g. processing a current of video signal go together with at least one other frame that is inherently a future frame of the video signal); and (iii) a "look-ahead estimator" unit separate from the decoder and the encoder (31 of fig. 3). In view of the discussion above, Nilsson clearly anticipates the claimed invention.

The applicant further argued that Kwok does not disclose or teach estimating a "picture complexity", even for a current picture, page 12 of the remarks.

The examiner respectfully disagrees with the applicant. It is submitted that Kwok suggests a picture complexity is estimated by a function of the total bits and the average quantization step size used to encode the picture, macro-block, or portion (42 and 47 of fig. 4;

note the total bits and quantization factor (step size) are estimated by the function of SF that used in the encoder (43 of fig. 4); see also col. 6, lines 8-25), the computation uses the picture and macroblock of the pictures so that is considered as picture complexity. Therefore, one skilled in the art would incorporate the teachings of Kwok into the system of Nilsson to encode the decoded video signal. In view of the discussion above, the claimed invention are unpatentable over Kwok and the combination of Nilsson and Kwok.

*Conclusion*

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Tung Vo  
Primary Examiner  
Art Unit 2613